
DISCOVERY OF LIVING METASEQUOIA

SAVE-THE-REDWOODS LEAGUE[1]

The genus *Metasequoia* is a conifer which was widely distributed over the northern hemisphere in past ages. Its fossil remains (wood, leaves, cones) have been found in Alaska, Greenland, Spitzbergen and northern Siberia, in rocks of Eocene age (60,000,000 years old); in rocks of Miocene age (30,000,000 years old) in Oregon and California, Germany and Switzerland, Manchuria and Japan. It was considered to have become extinct, some 20,000,000 years ago, since its fossil remains did not occur in rocks younger than Miocene.

About two years ago, reports came from China of the discovery of three trees of *Metasequoia* in a village in the interior. One of these living trees was described as large, but no photographs were available, nor was it possible to find out much about it. In order to establish the accuracy of this report, and to learn the true nature of these trees, Ralph W. Chaney, paleobotanist of the University of California and the Carnegie Institution of Washington, and Milton Silverman, Science Editor of the San Francisco "Chronicle", left San Francisco by Pan American World Airway plane in February, bound for Shanghai and Chungking; from this former capital of China, they proceeded down the Yangtse on a riverboat to Wan Hsien. Here they secured baggage porters and sedan chairs, and set out on a journey southward more than a hundred miles into the provinces of Szechuan and Hupeh. Traveling over a path largely made up of a rock slab stairway, they covered from 20 to 30 miles a day in rain and fog—a path which crossed four mountain ranges of which two were over 5000 feet high. This is a region seldom visited by foreigners—in fact, the remote village at the end of the journey had never before been entered by a foreign visitor. The reported presence of hundreds of bandits made necessary extreme precautions to prevent theft of cameras and other essential equipment; an armed guard was necessary during most of the journey.

[1]Based on a statement by Dr. Ralph W. Chaney, Professor of Paleontology, University of California, Berkeley; Chairman, Save-the-Redwoods League's Education and Interpretation Committee, 114 Sansome St., San Francisco 4, California.

"Just outside the village of Mo-tao-chi, 70 miles south of Wan Hsien", says Dr. Ralph W. Chaney, "we came upon the first trees of Metasequoia. The largest is nearly 100 feet tall, and 68 inches in diameter above the buttress (almost 11 feet in diameter where the buttress flares out at ground level). It has large branches which extend upward instead of turning downward as in the living redwood; another difference is that *Metasequoia* sheds its leaves in winter, so it was bare at the time of our visit; its bark has a reddish tone suggestive of the redwood, but is much thinner than that of the American tree. These and other differences readily distinguish *Metasequoia* from *Sequoia*, but a relationship between the two trees is at once apparent from the similarity of their cones, and their wood is also much the same. Preliminary examination indicates that *Metasequoia* may represent the ancestor of the American *Sequoia*.

"Continuing southward some 35 miles, we came into a valley occupied by over a hundred trees of *Metasequoia*. While none of these are as large as the giant tree at Mo-tao-chi, they are growing on slopes which have not been fully logged off, as is the case farther north. Here we were able to study the dawn redwood (*Metasequoia*) under essentially native conditions. It grows best beside streams or elsewhere in wet soil; it is not found at elevations far above 4000 feet, for it appears to require mild winter temperature. Its associates in the forest are chestnut, sweet gum, oak and birch, all of which trees grow today in many parts of the United States. In addition, there lives with *metasequoia* a large tree known as katsura which is confined to northeastern Asia at present. All these associates of the living *Metasequoia* had ancestral species growing with the fossil *Metasequoia* in western North America and Europe during the geologic past. Here we have a segment of yesterday—a forest which has miraculously survived destruction for a score of million years.

"How much longer will *Metasequoia* continue to exist in this central Asian sanctuary? An answer to the question is difficult to give, for in this land of fuel and timber shortage, these great trees of the past are rapidly being cut down by Chinese farmers. Some steps must be taken at once if *Metasequoia* is to be saved from extinction during our lifetime, if it is to continue to live on earth as one of the oldest, if not the most ancient forest tree in existence. At some time in the near future, an announcement will be made of the plans being made to preserve the *Metasequoia* of Tiger Valley from destruction."

Dr. Chaney and Dr. Silverman have recently returned to California with specimens of the wood, bark, leaves and cones of these remarkable trees, and with many scientific data which may be expected to aid in solving some of the problems surrounding the age-long survival of these Chinese ancestors of the California redwood.